

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



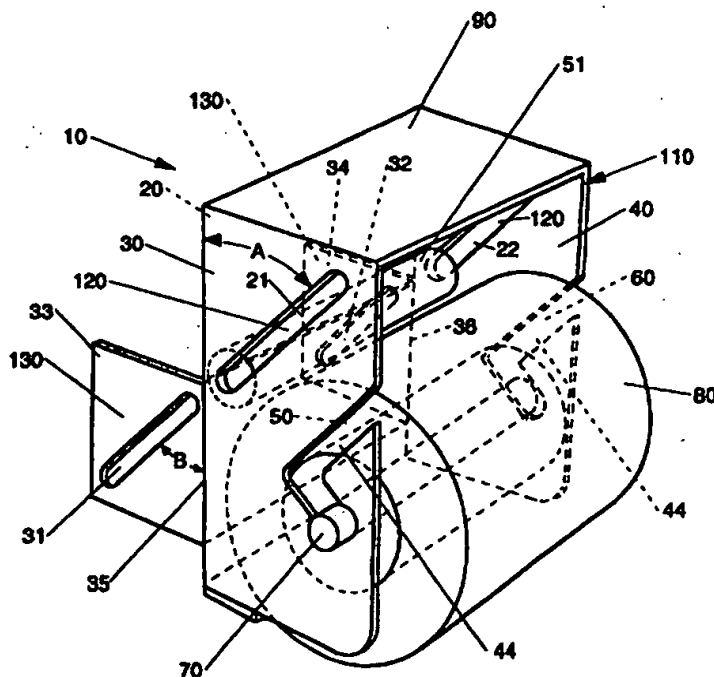
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A47K 10/32, 10/38	A1	(11) International Publication Number: WO 97/24054
		(43) International Publication Date: 10 July 1997 (10.07.97)
<p>(21) International Application Number: PCT/US96/20386</p> <p>(22) International Filing Date: 20 December 1996 (20.12.96)</p> <p>(30) Priority Data: 08/579,801 28 December 1995 (28.12.95) US</p> <p>(71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).</p> <p>(72) Inventors: DEARWESTER, Donald, David; 5975 Grand Canyon Drive, Las Vegas, NV 89129 (US). TOUSSANT, John, William; 8169 Shadybrook Drive, West Chester, OH 45069 (US).</p> <p>(74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217 (US).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>

(54) Title: APPARATUS FOR DISPENSING MULTIPLE PRODUCTS FROM A SINGLE TISSUE ROLL HOLDER

(57) Abstract

An apparatus (10) for dispensing toilet tissue and at least one other product is disclosed. A top wall (80) and two opposing side walls (30, 40) are connected together to form a housing (110). The apparatus (10) is readily attachable to ordinary toilet tissue roll holders (150) using a spindle (51) of the roll holder and without the need for adhesives or the like. The apparatus (10) receives at least one roll of toilet tissue by a spindle (70) or by other known hardware. The top wall (80) is adapted for holding additional products.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgyzstan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	KZ	Kazakhstan	SG	Singapore
CH	Switzerland	LI	Liechtenstein	SI	Slovenia
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovakia
CM	Cameroon	LR	Liberia	SN	Senegal
CN	China	LT	Lithuania	SZ	Swaziland
CS	Czechoslovakia	LU	Luxembourg	TD	Chad
CZ	Czech Republic	LV	Latvia	TG	Togo
DE	Germany	MC	Monaco	TJ	Tajikistan
DK	Denmark	MD	Republic of Moldova	TT	Trinidad and Tobago
EE	Estonia	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	UG	Uganda
FI	Finland	MN	Mongolia	US	United States of America
FR	France	MR	Mauritania	UZ	Uzbekistan
GA	Gabon			VN	Viet Nam

APPARATUS FOR DISPENSING MULTIPLE PRODUCTS FROM A SINGLE TISSUE ROLL HOLDER

5

FIELD OF THE INVENTION

The present invention relates to an apparatus for dispensing toilet tissue in conjunction with at least one other product. The invention has even further relation to such an apparatus which is readily attachable to an ordinary toilet tissue roll holder without the need for additional adhesives, hardware or the like.

10

BACKGROUND OF THE INVENTION

Ordinary toilet tissue roll holders have been well known for many years and are found in almost every household. Typically, these toilet tissue roll holders comprise a spring-loaded spindle which is inserted into a rigid member having a pair of opposing
15 holes. These holes are either recessed within a bathroom wall or extend from a bathroom wall.

Recently there has been a desire to supplement ordinary toilet tissue with other personal products, such as wet toilet wipes. Consumers have shown a preference for having wet toilet wipes near the toilet tissue in the bathroom and -- thus -- easily
20 accessible. However, using products such as wet toilet wipes requires another dispenser, in addition to the spindle used to dispense the toilet tissue.

There have, therefore, been attempts to provide an apparatus that can dispense both ordinary toilet tissue and at least one other product. One example of such an apparatus is given in United States Patent 3,799,467, issued to Bauman on March 26,
25 1974. Bauman discloses a toilet tissue holder and shelf combination. However, Bauman has the drawback that the toilet tissue and shelf combination are adapted to be attached to the side wall of a flush tank or other vertical support means, rather than to the existing tissue roll holder. Although the pre-existing roll holder is still present in the bathroom, it is not utilized.

One solution to this problem was to provide an apparatus for dispensing toilet tissue and another product, which apparatus is readily attachable to an ordinary toilet tissue roll holder. An example of this attempt is illustrated by U.S. Patent 3,943,859,
30 issued to Boone on March 16, 1976. Boone discloses a shelf-like device which is readily attachable to an ordinary toilet tissue roll holder and does not interfere with the dispensing of the toilet tissue. However, Boone has the drawback that the shelf is unstable and
35

requires adhesives or other hardware to hold the shelf in place. Boone requires considerable installation time, becomes permanent, and therefore would not be commercially acceptable. Furthermore, the Boone device cannot attach itself to recessed roll holders and therefore is not applicable to a wide range of existing roll holders.

5 Another example of an apparatus for dispensing toilet tissue and another product and which is readily attachable to an ordinary toilet tissue roll holder is illustrated by U.S. Patent 3,794,253, issued to Megdall on February 26, 1974. Megdall discloses a toilet paper roll holder further equipped to support a box of tissues. Megdall has the drawback of using resilient rod members that need to be disposed against a wall in order to put
10 pressure against the box of tissues to be supported. This pressure makes the structure unstable and may damage the wall. While Megdall is capable of supporting a roll of toilet paper and a box of facial tissues or the like, it is not well adapted to carry irregularly shaped products, such as commonly packaged wet toilet wipes.

Therefore, there has been a desire to provide a stable apparatus for dispensing
15 toilet tissue and at least one other product and which is readily attachable to an ordinary toilet tissue roll holder without the need for any additional hardware, adhesives or the like.

SUMMARY OF THE INVENTION

In accordance with the present invention an apparatus for dispensing toilet tissue
20 and at least one other product is provided. The apparatus is readily attachable to ordinary toilet tissue roll holders comprising a spindle and a pair of opposing holes for receiving the spindle. The apparatus is attachable to the roll holder without the need for adhesives or the like. The apparatus comprises a top wall, and two opposing side walls spaced apart by said top wall, all of which are connected together to form a housing. The housing further
25 includes a means of receiving at least one roll of toilet tissue. The top wall is adapted for holding additional products. The housing includes a device for attaching itself to an ordinary toilet tissue roll holder using a spindle of the toilet tissue roll holder such that the housing is secured in substantially fixed relation to a wall which further secures the toilet tissue holder.

30

BRIEF DESCRIPTION OF THE DRAWINGS

While the specification concludes with claims particularly pointing out and distinctly claiming the subject invention, it is believed that the same will be better understood from the following description taken in conjunction with the accompanying
35 drawings in which:

Figure 1 is a perspective view of the apparatus in accordance with the present invention.

Figure 2 is a view similar to Figure 1 showing the apparatus attached to an ordinary outwardly extending toilet tissue roll holder.

5 Figures 3 and Figures 4 are views similar to Figure 1 showing the apparatus attached to a recessed toilet tissue roll holder.

Figure 5 is a perspective view of the embodiment of the apparatus adapted to receive two rolls of toilet tissue and another product.

Figure 6 is similar to Figure 1 and shows the apparatus having nubs.

10 Figure 7 is similar to Figure 6 and shows the apparatus having a concave support.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like numerals indicate the same element throughout the views, there is shown in Figure 1 a perspective view of one
15 embodiment of an apparatus 10 for dispensing toilet tissue and at least one other product in accordance with the present invention.

Apparatus 10 has a top wall 90 and two opposing side walls 30 and 40 all of which are connected together to form a housing 110. In the preferred embodiments shown in
20 Figures 1-5, the apparatus 10 also has a back wall 20 to provide more structural integrity to the apparatus. The top wall 90 is adapted to receive and hold another product, such as and including, but not limited to, a pre-moistened personal cleansing wipe, a different type of toilet tissue, or other personal cleansing products. A personal cleansing product made according to commonly assigned U.S. Patent 5,332,118 issued to Muckenfuhs and incorporated herein by reference is suitable for use with the claimed invention.

25 Apparatus 10 of Figure 1 is designed to be attached to an existing roll holder in a secured and substantially fixed position to the roll holder and to the wall to which the roll holder is affixed. Because toilet tissue roll holders extend out from a bathroom wall or are recessed within the wall, the apparatus 10 is more versatile if attachable to a wide range of such holders. Apparatus 10 includes a first device 120 for attaching itself to a roll
30 holder that extends outwardly from the wall it is affixed to, and a second device 130 for attaching itself to a roll holder that is recessed within the wall.

The first device 120 is designed to attach the housing to a roll holder 150 which extends outwardly from the wall to which it is affixed. The first device 120 comprises two opposing slots 21 and 22, one on each side wall. The first device 120 can best be
35 described by referring to Figure 2 which shows apparatus 10 attached to an outwardly

extending roll holder 150. The slots 21 and 22 are adapted to receive a spindle 51 which for this discussion is an ordinary spring loaded spindle which is a part of the roll holder 150 and was originally designed to receive a roll of tissue. The ends of spindle 51 are inserted through the slots 21 and 22 of the housing 110 and are then inserted into the holes
5 52 of the roll holder 150, thereby securing the apparatus 10 to the roll holder 150 with the back wall 20, preferably substantially parallel to and secured in fixed relation to the wall to which the roll holder 150 is affixed.

Preferably, the apparatus 10 is compact. The slots 21 and 22 may be simple apertures or holes that match the size and placement of the holes 52. This, however, is
10 impractical in that the apparatus should be able to be attached to a wide range of different roll holders. To accomplish this, the slots 21 and 22 preferably range from about 2.5 to about 4.5 inches at their longest dimension and form an included angle A relative to the back wall 20 of about 30 to about 75 degrees, as shown in Figure 1. The smaller the included angle A, the more snug the apparatus 10 will attach itself to the roll holder.

Referring to Figures 1 and 3, the second device 130 is designed to attach the
15 housing to a roll holder 170 that is recessed within the wall to which it is affixed. The second device 130 comprises two outwardly extending members 33 and 34 having two opposing slots 31 and 32. Preferably the members 33 and 34 are hinged to the housing 110 so that when the apparatus 10 is attached to the outwardly extending roll holder 150,
20 the members 33 and 34 can articulate about hinges 35 and 36 so as to be substantially parallel with the back wall 20.

Referring to Figures 3 and 4, slots 31 and 32 are adapted to receive a spindle 71, which for this discussion is an ordinary spring loaded spindle 71 complementary to the roll holder 170. The ends of spindle 71 are inserted through the slots 31 and 32 of the housing
25 110 and are then inserted into the holes (not shown) of the roll holder 170, thereby securing the apparatus 10 to the roll holder 170 with the back wall 20 substantially parallel to and secured in fixed relation to a wall to which the roll holder 170 is affixed.

In the embodiment shown in Figure 4, members 33 and 34 are slidably extendible from the housing 110. When not in use, the members 33 and 34 are retracted so that they
30 do not project beyond the housing 110. When in use, the members 33 and 34 are extended from the housing 110 to be attached to a recessed roll holder 170. The slots 31 and 32 may be simple holes that match the size and placement of the holes of roll holder 170. Similarly to the slots 21 and 22, the slots 31 and 32 preferably range from about 2.5 to about 4.5 inches at their longest dimension and form an included angle B with back wall

20 of about 30 to about 75 degrees, as shown in Figure 1. The pairs of slots 21-22 and 31-32 may have the same length and be disposed at the same included angle A, B.

The apparatus further includes a structure 44 for receiving at least one roll of toilet tissue. In the preferred embodiment of the present invention, the structure 44 comprises at least one pair of opposing slots 50 and 60 disposed on side walls 30 and 40. The slots are adapted to receive a spindle 70 having a roll of tissue 80 disposed thereon. Figures 1 - 3 and 5 show the slots 50, 60 as being open-ended but the slots 50, 60 could simply comprise apertures or holes designed to receive a spring loaded spindle having a roll of tissue disposed thereon, as shown in Figure 4. As shown in Figures 4 and 5, the structure 44 can also comprise additional pairs of apertures 55 disposed on side walls 30 and 40 for receiving a spindle with a roll of toilet tissue 80 -- to give a consumer a greater flexibility in attaching the roll of a tissue 80 to the apparatus 10. As shown in Figure 5, the structure 44 may comprise two pairs of opposing and substantially co-extending slots 50, 60. The two pairs of the slots 50, 60 are preferably spaced apart such that they are capable of receiving two spindles 70, each having a roll of tissue 80.

It would be apparent to one skilled in the art that the structure 44 for receiving at least one roll of toilet tissue can comprise other devices. The examples include, but are not limited to, the use of one or more pairs of opposing and substantially co-extending nubs and the use of concave support. As used in this application, the term "nubs" designate protuberances disposed on opposing side walls 30 and 40, preferably within the housing 110. The protuberances preferably project towards each other and may or may not touch each other. Each pair of protuberances is adapted to receive a roll of toilet tissue. Alternatively, the structure 44 may comprise a support having concave or arcuate shape generally conforming a peripheral shape of a roll of toilet tissue. This concave support is preferably sized and disposed between the opposing side walls 30 and 40 of the housing 110 such that the roll of toilet tissue may rest within the concave portion of the support. The concave support may be shaped and disposed within the housing 110 such that the access of the roll of tissue is either vertically or horizontally oriented.

The housing 110 can be made out of any number of materials known in the art. It may be desired for promotional purposes to sell the apparatus inexpensively and make it out of paperboard or lightweight plastic. It would be apparent to one skilled in the art that the members 33 and 34, instead of being hinged to the housing 110, can be integral to the housing 110. In this case, lines of weakness extending between the members 33 and 34 and the rest of the housing 110 can perform the function of the hinges 35 and 36 so that the members 33 and 34 can be articulated about the lines of weakness. Alternatively, it

may be desired to make a more permanent housing 110 of durable plastic, metal, wood or other materials. In the case of a more permanent apparatus, the housing would most likely not need both devices 120 and 130 but rather one or the other.

As was stated above, the top wall 90 of the housing 110 is adapted to receive at least one other product. In the embodiment of Figure 1 the top wall 90 comprises a substantially planer surface 40, which is an integral part of the top wall 90. The planer surface 40 will be generally level and horizontal when the apparatus 10 is attached to a roll holder 50. The planer surface 40 thereby works with gravity to be able to receive an additional product. Figures 2-4 show a product 160 which can hold a number of personal products. Product 160 shown in Figures 2-4 comprises a commonly available product, in any suitably sized container.

There are a variety of couplers for receiving product 160. A wide range of adhesives such as two sided tape or hook and loop fasteners between the product 160 and the top wall 90 can optionally be used to ensure the product 160 does not inadvertently fall from the planar surface 40. The attachment of the product 160 to the apparatus could be permanent and done during manufacture or can be releasable and done by the consumer. It will be apparent to one skilled in the art that the container of the product 60 can be made an integral and inseparable part of the housing 110. A ledge can also be used to hold the product 160 on the top wall 90.

The scope of the present invention should be considered in terms of the following claims and is understood not to be limited to the details described and shown in the specification and drawings.

What Is Claimed Is:

1. An apparatus for dispensing toilet tissue and at least one other product, said apparatus being attachable without the need for adhesives or the like to a wall-mounted toilet tissue roll holder comprising a spindle of a roll holder and a member having a pair of opposing holes for receiving said spindle of a roll holder, said apparatus comprising:
a top wall and two opposing side walls spaced apart by said top wall, all of which are connected together to form a housing, said housing including a first device for attaching the housing to a toilet tissue roll holder such that when said apparatus is attached to a toilet tissue roll holder said apparatus is secured in substantially fixed relation to a toilet tissue roll holder, said housing further including a structure for receiving at least one roll of toilet tissue, said top wall being adapted to receive an additional product.
2. The apparatus of Claim 1 characterized in that said housing further includes a back wall connected to at least one of said top wall and said side walls, said back wall being generally parallel with a wall to which a toilet tissue roll holder is affixed.
3. An apparatus for dispensing toilet tissue and at least one other product, said apparatus being attachable without the need for adhesives or the like to an ordinary wall-mounted toilet tissue roll holder comprising a spindle of a roll holder and a member having a pair of opposing holes for receiving said spindle of a roll holder, said apparatus comprising:
a top wall, a back wall and two opposing side walls, all of which are connected together to form a housing, said housing including a first device for attaching itself to a toilet tissue roll holder such that when said apparatus is attached to a toilet tissue roll holder, said apparatus is secured in substantially fixed relation to a toilet tissue roll holder, said housing further including a structure for receiving at least one roll of toilet tissue, said top wall being adapted to receive a personal cleansing product.
4. The apparatus of Claims 1, 2 and 3 characterized in that said first device for attaching the housing to a toilet tissue roll holder receives said spindle of a roll holder, and preferably said first device for attaching said housing to a toilet tissue roll holder comprises a pair of opposing and substantially co-extending slots, one on each of said opposing side walls of said housing, for receiving said spindle of a roll holder.

5. The apparatus of Claim 4 further including a second device for attaching said housing to a toilet tissue roll holder by receiving said spindle of a roll holder, said second device comprising two substantially rigid members joined to said housing, each of said members being attached to said housing and having at least one slot therein for receiving said spindle of a roll holder, and preferably said slot range at its longest dimension from 2.5 to 4.5 inches and form an included angle relative to said back wall of said housing of 30 to 75 degrees.
6. The apparatus of Claim 5 characterized in that said substantially rigid members are articulably hinged to said housing such that said members can be articulated from a position substantially parallel with a wall to which a toilet tissue roll holder is affixed to a position outwardly extended from said housing.
7. The apparatus of Claim 5, characterized in that said substantially rigid members are slidably extendible from said housing between a retracted position and an extended position.
8. The apparatus of Claims 1, 2, 3 and 5 characterized in that said structure for receiving at least one roll of toilet tissue comprise at least one pair of opposing and substantially co-extending slots disposed on said opposing side walls of said housing, each said at least one pair receiving a spindle, said spindle being adapted to have a roll of tissue disposed thereon, and preferably said structure for receiving at least one roll of toilet tissue comprise two spaced apart pairs of said opposing and substantially co-extending slots capable of carrying two spindles, each spindle being adapted to receive a roll of tissue disposed thereon.
9. The apparatus of Claims 1, 2, 3 and 5 characterized in that said structure for receiving at least one roll of toilet tissue comprises at least one pair of opposing and substantially co-extending nubs disposed on said opposing side walls of said housing, said nubs being adapted to receive at least one roll of toilet tissue.
10. The apparatus of Claims 1, 2, 3 and 5 characterized in that said structure for receiving at least one roll of toilet tissue comprises a support having a concave shape generally conforming to the peripheral shape of said at least one roll of toilet tissue and disposed between said opposing side walls of said housing such that said at least one roll of toilet tissue may rest within the concave portion of said support.

1/7

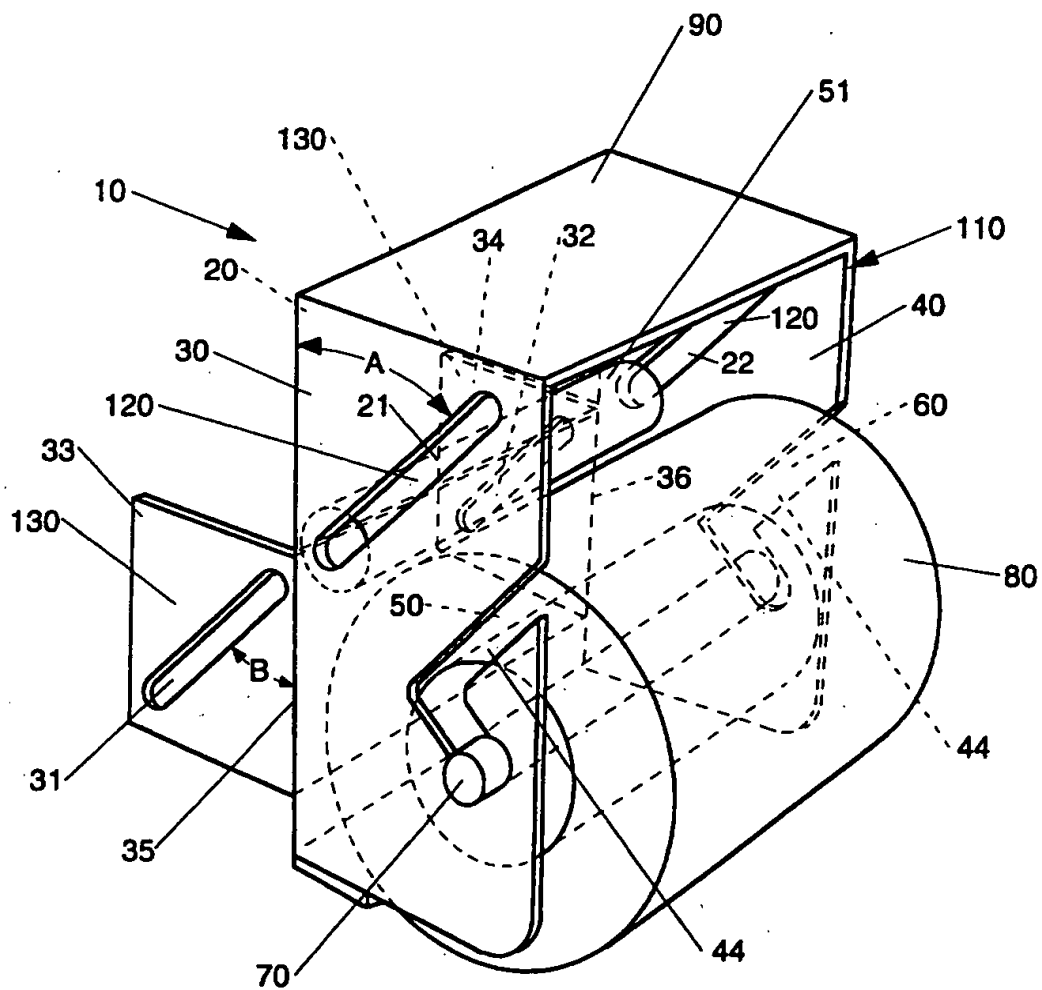


Fig. 1

2/7

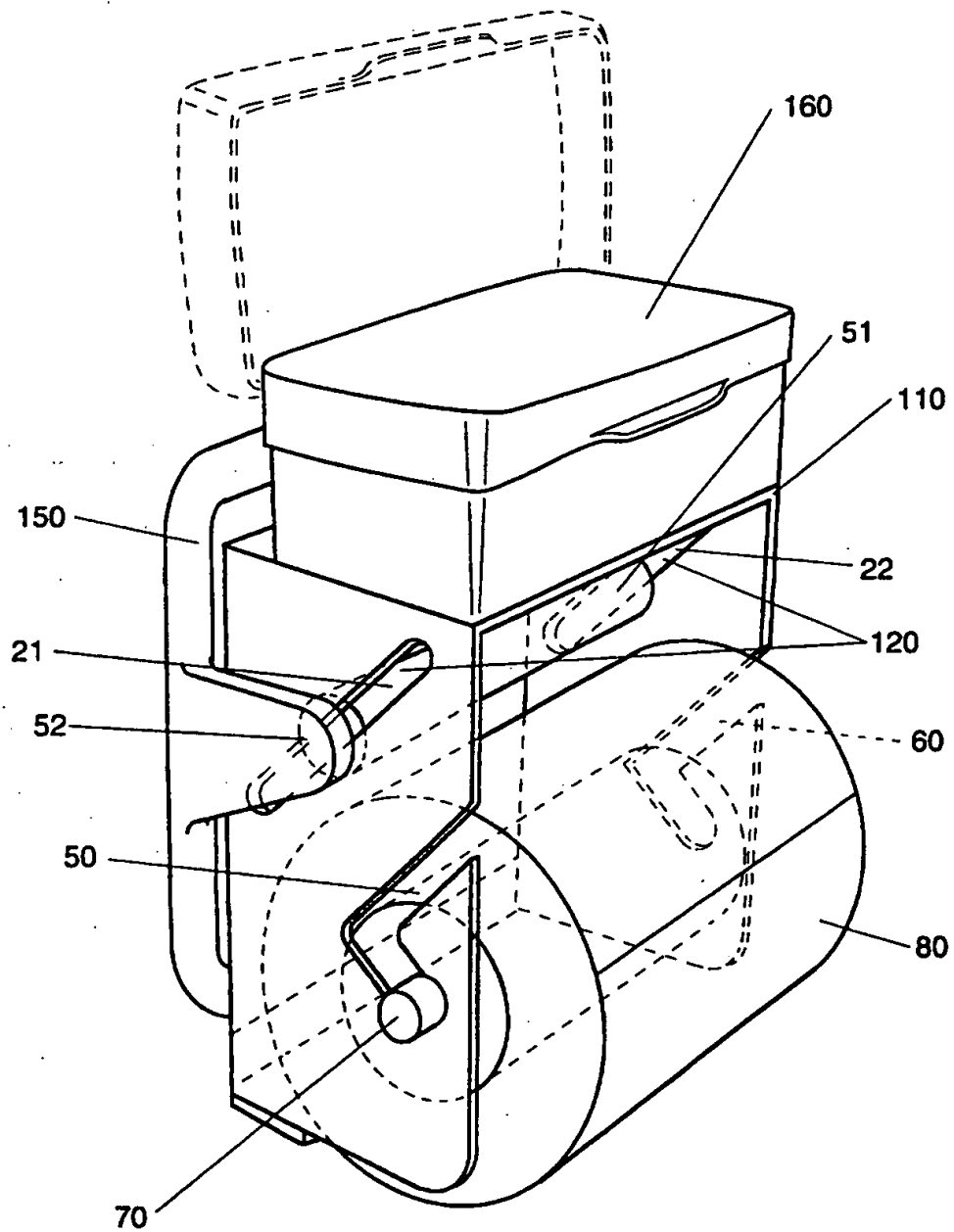


Fig. 2

3/7

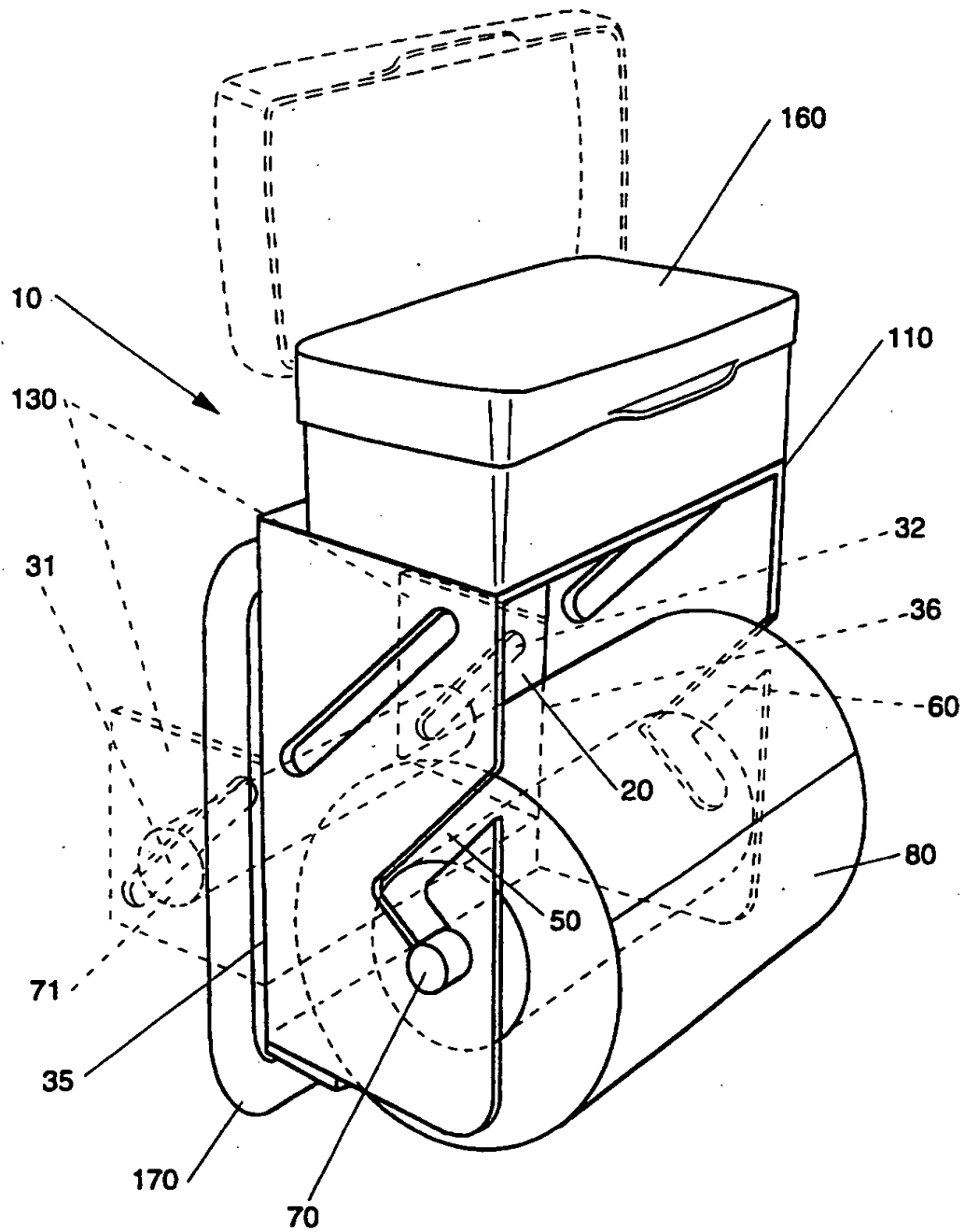
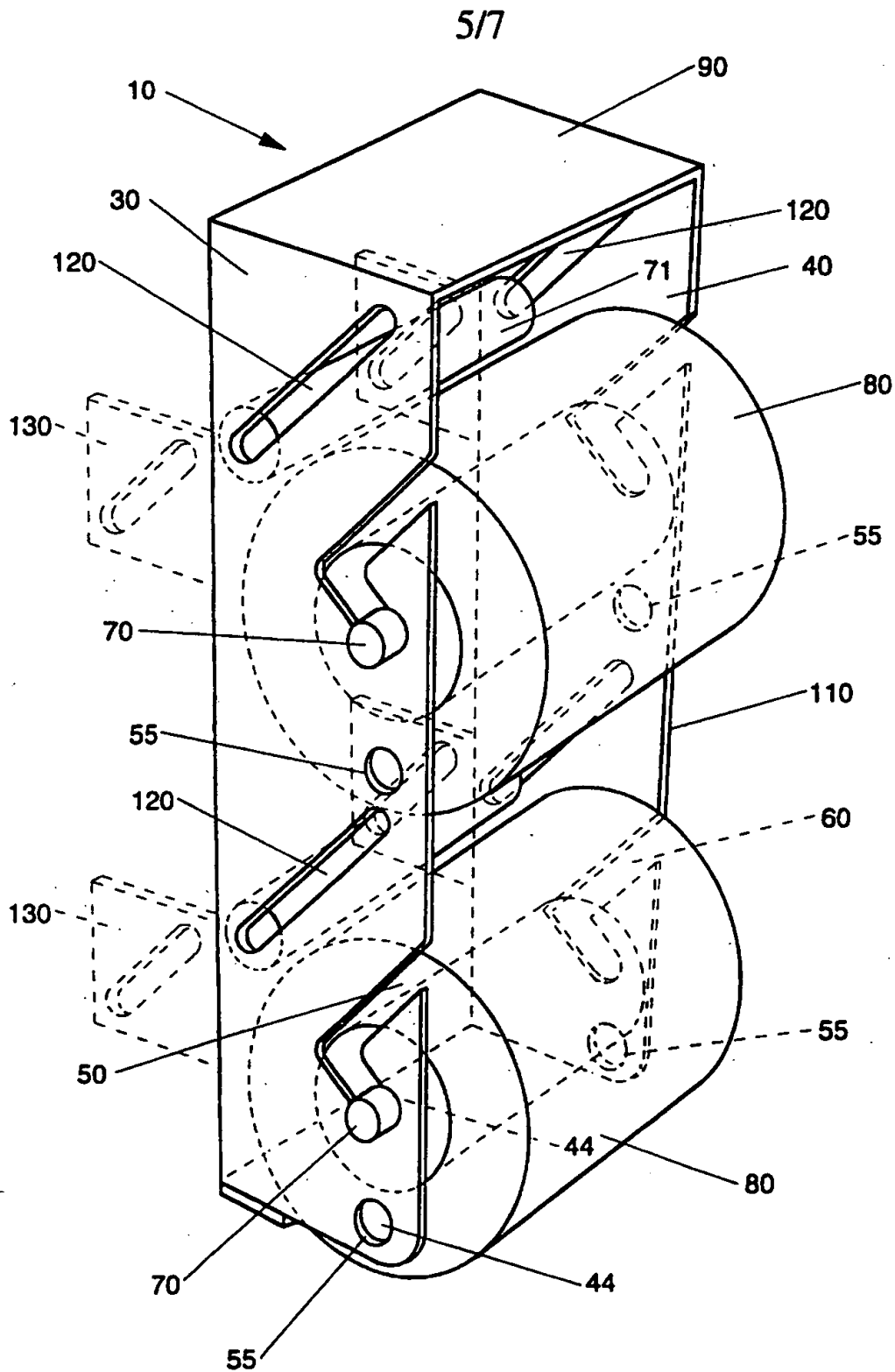


Fig. 3



6/7

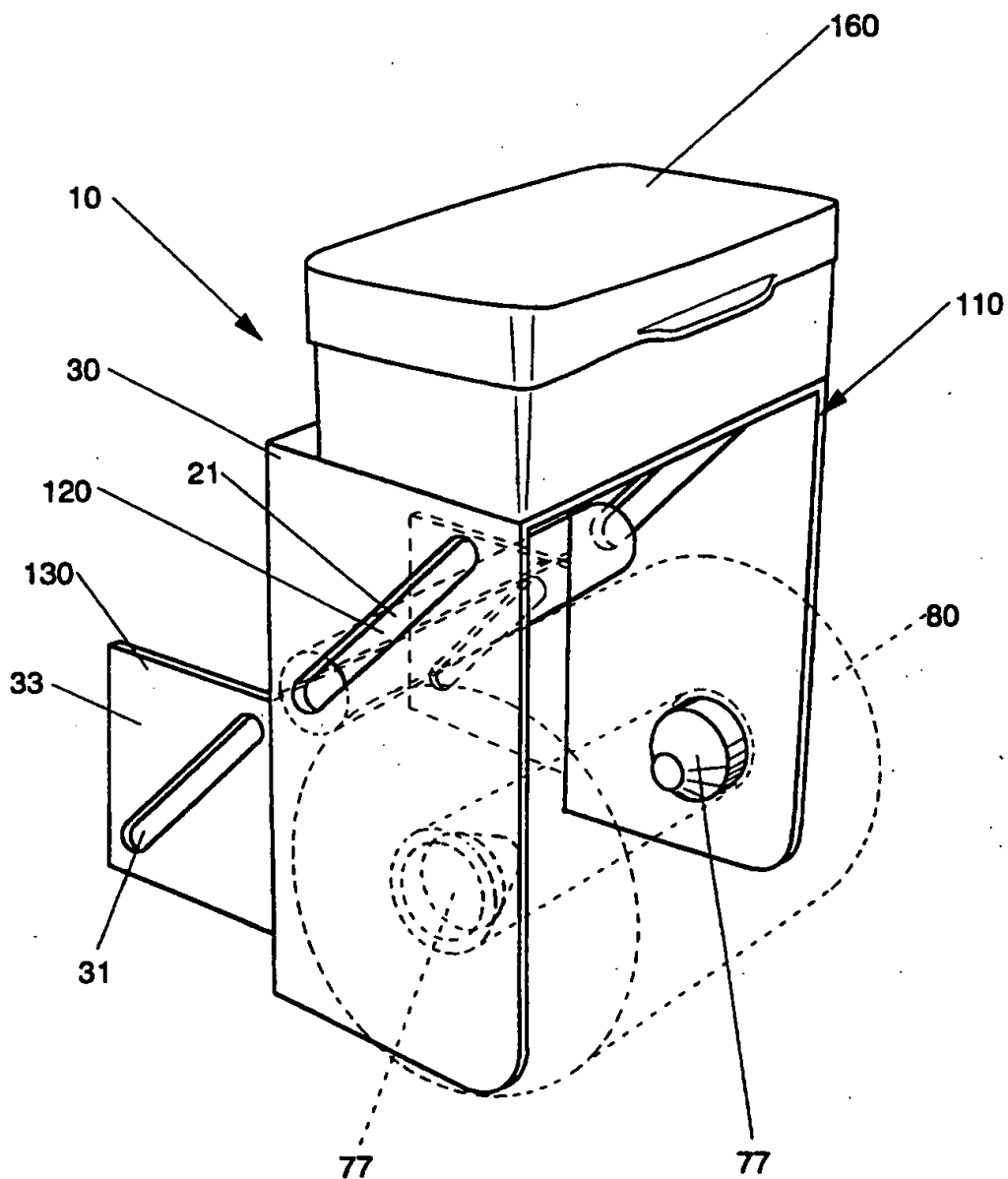


Fig. 6

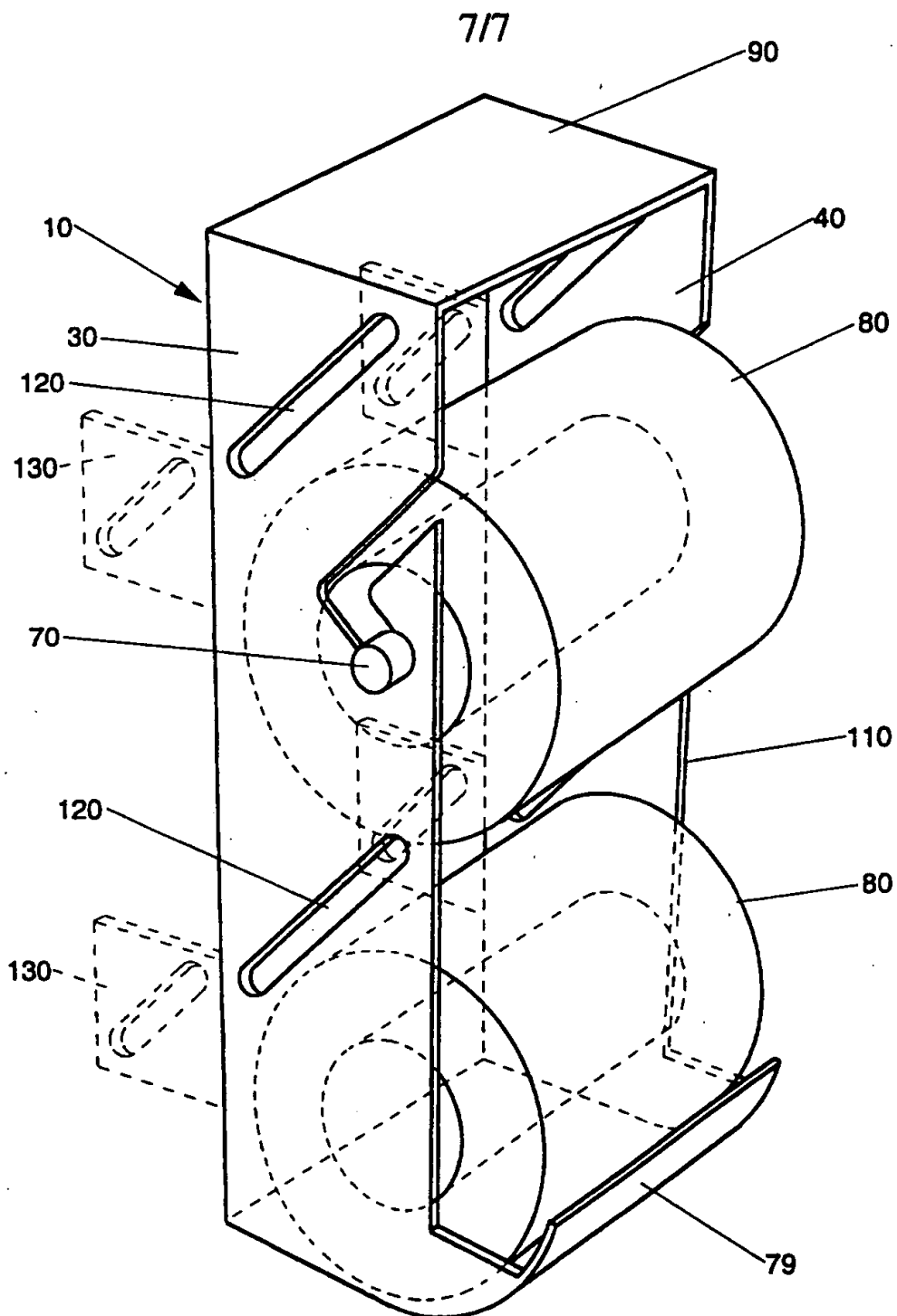


Fig. 7

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 96/20386

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A47K10/32 A47K10/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A47K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 205 802 A (ECONOMAKIS ELIAS) 3 June 1980 see column 3, line 59 - column 5, line 39; figures	1-3,8
Y	---	4,9,10
X	US 5 311 986 A (PUTZ JOAN M) 17 May 1994 see column 4, line 40 - column 5, line 4 see column 5, line 49 - column 6, line 31; figures	1-3
Y	---	4
Y	US 3 421 800 A (BROWN EVERETTE VERNON) 14 January 1969 see column 2, line 19 - line 26; figure 1	9
Y	US 5 149 003 A (THARP GLEN D) 22 September 1992 see column 2, line 34 - line 51; figure 1	

	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

9 April 1997

Date of mailing of the international search report

22.04.97

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentaan 2
NL - 2280 HV Rijswijk
Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+ 31-70) 340-3016

Authorized officer

Kriekoukis, S

INTERNATIONAL SEARCH REPORT

Int. l. Application No
PCT/US 96/20386

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 713 561 A (WYANT G) 30 January 1973 see figures 2,3,5 ---	10
A	GB 2 077 226 A (TSUNETSUGU TAKAAKI) 16 December 1981 see figures 1,5 -----	5,6

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 96/20386

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4205802 A	03-06-80	NONE	
US 5311986 A	17-05-94	NONE	
US 3421800 A	14-01-69	NONE	
US 5149003 A	22-09-92	NONE	
US 3713561 A	30-01-73	NONE	
GB 2077226 A	16-12-81	AU 527803 B	24-03-83
		AU 6857081 A	17-12-81
		BR 8100941 A	12-01-82
		CA 1156982 A	15-11-83
		DE 3045100 A	24-12-81
		FR 2483765 A	11-12-81
		US 4381083 A	26-04-83